



Form PTO-1449 (REV. 7-80)				Atty. Docket No.		Serial No.	
<b>LIST OF PRIOR ART CITED BY APPLICANT</b>  (Use several sheets if necessary)				9872		08/743,360	
				Applicant Ted Christopher			
		Filing Date		Group			
		November 8, 1996					
<b>U.S. PATENT DOCUMENTS</b>							
EXAMINER INITIAL*		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE (if appropriate)
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
<b>FOREIGN PATENT DOCUMENTS</b>							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION
							YES NO
	AK						
	AL						
	AM						
	AN						
	AO						
<b>OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)</b>							
	AP	"Second Harmonic Imaging and Harmonic Doppler Measurements With Alburnex," Chang, et al., <u>1994 Ultrasonics Symposium</u> , pp. 1551-1554.					
	AR	"In Vivo and In Vitro Ultrasound Beam Distortion Measurements of a Large Aperture and a Conventional Aperture Focussed Transducer," Moshfeghi, et al., <u>Ultrasound in Med and Biol.</u> , Vol. 14, No. 5, pp. 415-428, 1988.					
	AS	"Physical Acoustics: Ultrasonic Techniques," Makin, <u>J. Acoust. Soc. Am.</u> Vol. 97, No. 5, Pt. 2, May 1995.					
	AT	"Generation of harmonics in a focused Gaussian sound field," Du, et al., <u>J. Acoust. Soc. Am.</u> 97 (3), pp 1486-1488, March 1995.					
	AU	"Nonlinear Propagation in Doppler Ultrasound," McDicken, et al., <u>Ultrasound in Med &amp; Biol.</u> , Vol 19, No. 5, pp. 359-364, 1993.					
	AV	"Multi-frequency transducer assembly for nonlinear ultrasonic measurements," Wu, et al., <u>J. Acoust. Soc. Am.</u> 93 (4), Pt. 1, pp. 2231-234, April 1993.					
EXAMINER				DATE CONSIDERED			
				6-1-05			
* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPRP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							

Form PTO-1449 (REV. 7-80)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		Atty. Docket No. 9872		Serial No. 08/746,360	
<b>LIST OF PRIOR ART CITED BY APPLICANT</b> (Use several sheets if necessary)				Applicant Ted Christopher			
				Filing Date November 8, 1996		Group	
<b>U.S. PATENT DOCUMENTS</b>							
EXAMINER INITIAL*		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE (if appropriate)
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
<b>FOREIGN PATENT DOCUMENTS</b>							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
	AK						
	AL						
	AM						
	AN						
	AO						
<b>OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)</b>							
	AP	"Errors in attenuation measurements due to nonlinear propagation effects," Zegiri, <u>J. Acoust. Soc. Am.</u> 91(5), pp. 2585-2593, May 1992.					
	AR	"Harmonic generation in finite amplitude sound beams from a rectangular aperture source," Kamakura, et al., <u>J. Acoust. Soc. Am.</u> 91 (6), pp. 3144-3151, June 1992.					
	AS	"The Enhancement of Second Harmonic Generation In Ultrasonic Microscopic Observation By Triple Transition," Din, et al., <u>1993 Ultrasonic Symposium</u> , pp. 575-578.					
	AT	"Non-Linearity and finite amplitude effects," <u>European Journal Of Ultrasound</u> , 1 pp. 219-215, 1994.					
	AU	"Time-shift compensation of ultrasonic pulse focus degradation using least-mean-square error estimates of arrival time," Liu, et al., <u>The Journal of the Acoustical Society of America</u> , Vol. 95, No. 1, pp. 542-555, January 1994.					
	AV	"Adaptive focusing in scattering media through sound-speed inhomogeneities: The van Cittert Zernike approach and focusing criterion," Mallert, et al., <u>J. Acoust. Soc. Am.</u> , 96 (6), pp. 3721-3732, December 1994.					
EXAMINER <i>[Signature]</i>				DATE CONSIDERED 6-1-95			
* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							

Form PTO-1449 (REV. 7-80)		Atty. Docket No. 9872	Serial No. 08/746,360
<b>LIST OF PRIOR ART CITED BY APPLICANT</b> (Use several sheets if necessary)		Applicant Ted Christopher	
		Filing Date November 8, 1996	Group




## U.S. PATENT DOCUMENTS


EXAMINER INITIAL*		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE (if appropriate)
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
	AK							
	AL							
	AM							
	AN							
	AO							

## OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

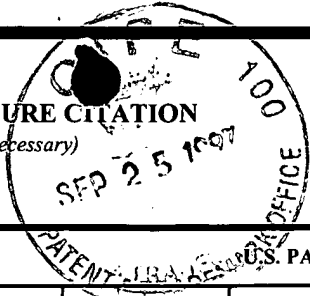
	AP	"Wavefront amplitude distribution in the female breast," Zhu, et al., <u>J. Acoust. Soc. Am.</u> , 96 (1), pp. 1-9, July 1994.
	AR	"An experimental investigation of the nonlinear pressure field produced by a plane circular piston," TenCate, <u>J. Acoust. Soc. Am.</u> 94 (2), Pt. 1, pp. 1084-1089, August 1993.
	AS	"New approaches to nonlinear diffractive field propagation," Christopher, et al., <u>J. Acoust. Soc. Am.</u> 90 (1), pp. 488-499, July 1991.
	AT	"Imaging the Acoustic Nonlinearity Parameter with Finite-Amplitude Sound Waves: The Difference-Frequency Method and the Second-Harmonic Method," Nakagawa, et al., <u>IEICE Transactions</u> , Vol. E71, No. 8, pp.799-809 August 1988.
	AU	
	AV	

EXAMINER 	DATE CONSIDERED 6-1-05
--	------------------------

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

# INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)



Docket Number (Optional)

9872

Application Number

08/746,360

Applicant(s)

Ted Christopher

Filing Date

November 8, 1996

Group Art Unit

3305

## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
[Signature]		5,456,257	10/10/95	Johnson et al.			
		5,540,909	7/30/96	Schutt			
		5,577,505	11/26/96	Brock-Fisher et al.			
		5,628,320	5/13/97	Teo			
		5,628,322	5/13/97	Mine			
		5,632,277	5/27/97	Chapman et al.			

## FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
							YES	NO
[Signature]		WO 96/13213	5/9/96	PCT				
[Signature]		EP 0 770 352 A1	5/2/97	EPO				

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

[Signature]		Translation of Japanese Patent Application Publication Kokai: Heisei 8-294487
		"Modeling Acoustic Field Propagation for Medical Devices" (1993) PhD. Thesis by Dr. Ted Christopher

EXAMINER

[Signature]

DATE CONSIDERED

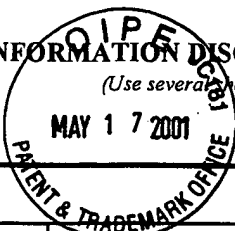
6-1-05

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

# INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

MAY 17 2001



Docket Number (Optional)

9872

Application Number

08/746,360

Applicant(s)

Ted Christopher

Filing Date

November 8, 1996

Group Art Unit

3305

## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

RECEIVED

MAY 22 2001

TECHNOLOGY CENTER R3700

## FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
							YES	NO
14		8-294487	11/12/96	Japan				

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)


EXAMINER

*[Signature]*

DATE CONSIDERED

6-1-05

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



## INFORMATION DISCLOSURE CITATION

(Use separate sheets if necessary)

MAY 27 2005

Docket Number (Optional)

9872

Application Number

08/746,360

Applicant(s)

Ted Christopher

Filing Date

November 8, 1996

Group Art Unit

3737

## U.S. PATENT DOCUMENTS

Director's Office

Group 3700

*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	5,833,613	11/10/1998	Averkiou et al.			
	6,315,729 B1	11/13/2001	Averkiou et al.			
	6,575,910 B2	6/10/2003	Averkiou et al.			
	6,540,684 B2	4/1/2003	Averkiou et al.			
	5,706,819	1/13/1998	Hwang et al.			
	5,951,478	9/14/1999	Hwang et al.			
	60/018,095	5/22/1996				
	60/013,950	3/22/1996				
	60/032,771	11/26/1996				
	60/005,009	10/10/1995				

## FOREIGN PATENT DOCUMENTS

REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER

DATE CONSIDERED

06-01-05

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

# INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

Docket Number (Optional)

9872

Application Number

08/746,360

Applicant(s)

Ted Christopher

Filing Date

November 8, 1996

Group Art Unit

3305

FEB 20 1993

## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
<i>AM</i>		5,706,819	1/13/98	Hwang et al.			

## FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
							YES	NO

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)


EXAMINER

DATE CONSIDERED

6-1-05

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



# INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

Docket Number (Optional)

9872

Application Number

08/746,360

Applicant(s)

Ted Christopher


Filing Date

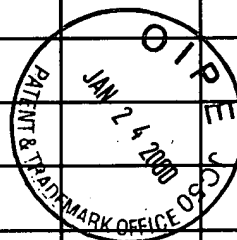
November 8, 1996

Group Art Unit


3305

## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		5,897,500	04/27/99	Zhao			
		5,846,202	12/08/98	Ramamurthy, et al.			
		5,833,614	11/10/98	Dodd, et al.			
		5,833,613	11/10/98	Averkiou, et al.			
		5,740,128	04/14/98	Hossack, et al.			
		5,577,505	11/26/96	Brock-Fisher, et al.			
		5,396,285	03/07/95	Hedberg, et al.			
		5,313,948	05/24/94	Murashita, et al.			
		5,111,823	05/12/92	Cohen			
		5,034,931	07/23/91	Wells			
		4,610,255	09/09/86	Shimura, et al.			





## FOREIGN PATENT DOCUMENTS

REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation YES NO
	851 241 A2	07/01/98	Europe			

TECHNOLOGY CENTER 3700

RECEIVED  
FEB 2000

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	Averkiou, et al., (1995), "Measurements of harmonic generation in a focused finite-amplitude sound beam", J. Acoust. Soc. Am 98(6), pp. 3439-3442.
	Dunn, et al., (1981), "Ultrasonic determination of the nonlinearity parameter B/A for biological media", J. Acoust. Soc. Am. 69(4), pp. 1210-1212.

EXAMINER



DATE CONSIDERED

6-1-05

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.